



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

45

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,147	12/11/2003	Reji Paul Wilson	DN2002133P01	7384
7590 08/30/2004			EXAMINER	
The Goodyear Tire & Rubber Company Patent & Trademark Department - D/823 1144 East Market Street Akron, OH 44316-0001			BRINSON, PATRICK F	
			ART UNIT	PAPER NUMBER
			3752	

DATE MAILED: 08/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/733,147

Applicant(s)

WILSON ET AL.

Examiner

Patrick F. Brinson

Art Unit

3752

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 8 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/5/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-7 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,536,479 to **Wilson et al.** in view of U.S. 5,476,121 to **Yoshikawa et al.**

The patent to **Wilson et al.** discloses a refrigerant hose including a inner barrier layer (12), a radially outer intermediate layer (18) bonded directly to the inner barrier layer, a reinforcing layer (20), and a cover layer (22) wherein the barrier layer is formed of at least two resin layers (14, 16). The barrier layer is the innermost layer of the hose. The barrier layer includes a polyamide layer, and the intermediate layer is formed of a material including EPDM, as recited in claim 12. **Wilson et al.** does not disclose the barrier layer formed of two different materials, one of which is a vinyl resin. The patent to **Yoshikawa et al.** discloses a low permeable rubber hose including an inner barrier layer (1), a radially outer intermediate layer (4), a reinforcing layer (5), and a cover layer (6),

wherein the barrier layer may be formed of at least two resin layers and wherein the two resin layers may be formed of two different materials and at least one of the resin layers being a vinyl resin. Col. 4 discloses that the inner resin tube is selected from materials including polyolefins, polyamides, and vinyl resins, such as polyvinyl fluoride and polyvinylidene fluoride. The reference further states that these resins may be used alone or as a blend of two or more of the foregoing resins. Col. 5 states that the inner tube may have a single layer structure or a laminate structure having two or more layers. It is disclosed that the inner layer preferably a thickness of between 0.0004 in to 0.004 inches. Col. 7 discloses the intermediate layer being selected from materials including isobutylene-isoprene copolymer rubber (IIR) and EPDM. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the barrier layer of **Wilson et al.** so that the two layers that form the barrier layer are formed of at least two different materials, one of which is a vinyl resin, as suggested by **Yoshikawa et al.** in order to produce a hose having an inner layer that is relatively high in moisture permeability.

2. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Wilson et al.** in view of **Yoshikawa et al.** as applied to claim 1 above, and further in view of US 6,068,026 to **Garois**.

The patent to **Wilson et al.**, as modified, does not disclose an elastomeric layer radially inward of the inner barrier layer. The patent to **Garois** discloses a refrigerant hose including an inner layer (10), an intermediate layer (12), reinforcement layer (14) and outer cover layer (16). Within the inner barrier layer is a thin layer of elastomer (18). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide to the hose of **Wilson et al.**, as modified, an elastomeric layer within the barrier layer, as suggested by **Garois** in order to improve sealing when the pipe is mounted on a connection end piece or the like.

***Allowable Subject Matter***

3. Claims 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Flepp et al., Igarashi et al. '675 and '564, Kitami et al., Campbell, Nie et al., Ito et al., and Brunnhofer are all pertinent to Applicant's invention in disclosing multilayer tubings, most of which transport refrigerant.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Patrick F. Brinson** whose telephone number is (703) 308-0111. The examiner can normally be reached on M-F 7:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Michael Y. Mar** can be reached on (703) 308-2087. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Patrick F. Brinson  
Primary Examiner  
Art Unit 3752

P. F. Brinson  
August 27, 2004